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No. 06-937

IN THE
Supreme Court of the United States

QUANTA COMPUTER, INC., QUANTA COMPUTER USA, INC., Q-LITY COMPUTER, INC.,

Petitioners,

v.

LG ELECTRONICS, INC.,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF QUALCOMM INCORPORATED AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENT

MICHAEL D. HARTOGS
QUALCOMM INC.
5775 Morehouse Drive
San Diego, CA 92121
(858) 587-1121

RICHARD W. CLARY
Counsel of Record
CRAVATH, SWAINE & MOORE LLP
825 Eighth Avenue
New York, NY 10019-7475
(212) 474-1000

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INTEREST OF *AMICUS*[1]

As a pioneer and leading innovator in the field of wireless communications whose businesses rely significantly on patent licensing and integrated circuit chip sales, QUALCOMM Incorporated ("Qualcomm") has a strong interest in the Court's interpretation of patent law. Non-trivial changes to the controlling interpretation of United States patent law have the potential to affect significantly and fundamentally the foundations of Qualcomm's businesses (and those of other high technology companies).

As is typical in high technology industries, patent licenses between major companies in the wireless industry are almost always granted as to patent portfolios or substantial portions of patent portfolios, as opposed to individual patents, regardless of the products produced by the licensee. Because a great number of companies have extensive patent portfolios, it would be cumbersome to identify all the specific patents required for a particular licensee's product(s), and the licensee would want assurances that all the patents it needs have been included in the license. Thus, it is typically the practice of Qualcomm and other participants in the wireless industry to grant licenses to all or a

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[1] The parties have consented to the filing of this brief. No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae* or its counsel made a monetary contribution to this brief's preparation or submission.

substantial portion of a patent portfolio, and, by the terms of the license agreement, to restrict the rights granted in connection with the portfolio to match the products that are produced by the licensee, and agree to compensation commensurate with the scope of the rights actually granted.

The various arrangements through which Qualcomm licenses its patents and earns revenue in the wireless industry are materially different from the arrangements currently before the Court as described in the publicly available record of this case. However, Petitioners and certain of the *amici* who support Petitioners urge the Court to paint with a very broad brush and to use this case improperly to expand the bounds of the exhaustion doctrine in a way that potentially would render Qualcomm and other patent owners unable to receive royalties in an amount commensurate to the significant economic value of their innovations by efficiently dividing and restricting rights granted at different stages in the chain of production.

STATEMENT

1. Qualcomm was co-founded in 1985 by its current Chairman Dr. Irwin Jacobs, who is a recipient of the National Medal of Technology, the highest honor awarded by the President of the United States to America's leading innovators. From shortly after its founding, Qualcomm has pioneered and developed the application of code division

multiple access ("CDMA"[2]) technology in the field of commercial cellular telephone communications. Hardly an overnight success, it took 16 years and over $5 billion in R&D and other strategic investments before Qualcomm's revenues caught up with its expenditures in 2001. Qualcomm has spent billions of dollars more since then on R&D focused on advancing wireless technologies.

Prior to Qualcomm's development of CDMA as a commercial technology, spread spectrum technologies (of which CDMA is one type) were studied by the military and other non-commercial interests. CDMA was also studied by a number of U.S. and foreign companies but rejected by them as a viable commercial technology due to a number of seemingly insurmountable technical hurdles. Then, in 1989, the U.S.-based Telecommunications Industry Association ("TIA") endorsed a cellular communications technology called time division multiple access ("TDMA"), a digital communications technique not based on CDMA that suffers from spectral limitations. By 1990, most of the cellular communications industry worldwide had also adopted various implementations of TDMA for second generation ("2G") cellular systems.

However, because Qualcomm believed CDMA to be technologically superior to TDMA, to the disbelief of the industry, Qualcomm undertook great risk and spent considerable sums of money to develop,

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[2] There exist various versions or so-called flavors of CDMA such as CDMA2000 and WCDMA. This brief will refer to the flavors of CDMA, collectively, as "CDMA".

standardize, promote the adoption of and gain the carriers' (such as Sprint and the predecessors of Verizon Wireless) acceptance of CDMA. Qualcomm was, for all practical purposes, alone in its early efforts, and so it was necessary for Qualcomm to produce all products required to demonstrate that CDMA could be the basis for a commercially viable system. This included CDMA chips, CDMA handsets and CDMA infrastructure equipment (e.g., the equipment associated with cell towers, called "base stations"). Qualcomm first produced such products for use in laboratories, then on a small scale suitable for presentations to industry groups, then throughout San Diego, where Qualcomm is headquartered, and eventually on a wide scale. Notwithstanding severe industry skepticism, Qualcomm ultimately succeeded. In 1993, the TIA issued its first standard for 2G CDMA. Thereafter, major U.S. carriers conducted extensive studies of TDMA and CDMA and several eventually chose CDMA as their 2G cellular technology.

Largely because CDMA-based technologies offer data transmission rates and spectral efficiency far greater than those offered by TDMA-based technologies, CDMA-based solutions now have been adopted for *all* third generation ("3G") wireless telephony and broadband standards throughout the world. Qualcomm has continued to lead in the invention and development of enhancements to CDMA to support higher data rates.

2. Qualcomm possesses over six thousand U.S. patents and patent applications relating to CDMA and other technologies. By way of example, Qualcomm owns patents with claims covering

wireless baseband integrated circuits (chips), RF components (a term used to refer to radio frequency receiving components and radio frequency transmitting components), software, complete wireless handsets, infrastructure equipment, applications and complete wireless systems (i.e., the network of base stations, handsets, and that which makes them work together), and its patents include apparatus claims, method claims, system claims and combination claims that reach every level in a wireless system.

While Qualcomm is no longer in the business of producing CDMA handsets and infrastructure equipment, having divested those businesses to more mature manufacturing companies, its experience researching, developing and producing all of the types of products and components necessary for the commercial deployment of CDMA, coupled with its extensive efforts to research and develop CDMA technology generally, have led to its broad and deep pool of patents.

Qualcomm has striven to promote the broad-based licensing of its patent portfolio, not merely to generate licensing revenues for Qualcomm, but also because broad access to Qualcomm's intellectual property has enabled innovation by many other companies, the rapid growth of CDMA technology, and a vibrant and competitive wireless industry, all to the benefit of consumers. Qualcomm is a member of many standards setting organizations, which typically request that a member commit to license its patents that are actually essential to a standard on terms that are Fair, Reasonable and Non-Discriminatory ("FRAND"). Such patents are

sometimes referred to as "technically necessary" to implement a particular standard. Qualcomm has offered licenses to its portfolio of technically necessary patents on FRAND terms to entities desiring such a license to produce products that implement a given standard. Qualcomm also has offered licenses that cover essentially its entire portfolio of patents (including patents that are not technically necessary to implement a standard, but nonetheless may be desirable to utilize). Qualcomm has entered into over 200 patent license agreements covering all or substantial portions of its patent portfolio. Indeed, both Petitioners and Respondent are Qualcomm licensees. These portfolio licenses have enabled numerous entities to manufacture and sell a wide variety of CDMA components, products and combinations thereof, including wireless chips and handsets.

In addition, Qualcomm is, itself, a licensee under numerous patent portfolios owned by other companies. Like many innovators, Qualcomm is rewarded for its patented inventions in several ways, including by receipt of cross-licenses to extensive and valuable patent portfolios (and the "patent peace" that comes from such cross-licenses), by receipt of royalty payments, and by profits from sales of components and products that practice its own patents and patents licensed from other companies.

3. Qualcomm's primary sources of revenue are (1) sales of chips (called Application Specific Integrated Circuits or ASICs) used in cellular telephones, through its chip division, Qualcomm

CDMA Technologies ("QCT")[3]; (2) licensing its intellectual property to entities that produce (non-Qualcomm) chips, through its licensing division, Qualcomm Technology Licensing ("QTL"); and (3) licensing its intellectual property, through QTL, to entities that produce "Subscriber Units", a term that refers to, *inter alia*, wireless handsets.[4] Because an understanding of the many ways in which innovators in high technology industries achieve revenue (and patent peace) through licensing arrangements is important to the Court's analysis of the potential effects an overly expansive patent exhaustion doctrine may have on technology-based industries, Qualcomm lays out in some detail below relevant aspects of its own chip sales and chipset and handset licensing practices.

Qualcomm has provided chipmakers nontransferable, worldwide, nonexclusive, restricted licenses to its portfolio of technically necessary patents through licensing agreements called ASIC Patent License Agreements ("APLAs"). Chipmaker-licensees typically pay Qualcomm an up-front license fee and a running royalty (paid quarterly) that is an agreed upon percentage of the defined Net Selling Price of the chips produced by the licensee. As is common in the industry and has been found by the

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[3] Both Petitioner and Respondent purchase ASICs from Qualcomm.

[4] Qualcomm also licenses its intellectual property to entities that produce other types of wireless communications products, including cellular telephone infrastructure equipment. For ease of presentation, this *amicus* brief will focus on chipsets and handsets.

Court plainly to be within the rights of patent holders, *see, e.g., Gen. Talking Pictures Corp. v. W. Elec. Co.*, 305 U.S. 124, 127 (1938) ("That a restrictive license is legal seems clear.") (citing *Mitchell v. Hawley*, 83 U.S. (16 Wall.) 544 (1872)), the license that Qualcomm has granted in APLAs is limited in scope and conditioned upon the licensee acting within the bounds of its limited license. An APLA provides the chipmaker-licensee with a license to *make* (or have made) its own ASICs. An APLA also provides the chipmaker-licensee with a restricted license to *sell* ASICs, but only to handset makers that the APLA defines to be an "Authorized Purchaser" for incorporation into fully assembled handsets. Authorized Purchasers are those handset makers that themselves have a license from Qualcomm through their own Subscriber Unit License Agreement ("SULA") to make, use and sell fully assembled handsets that, in the absence of a SULA, would infringe Qualcomm's patents. Importantly, by their express terms, APLAs do *not* grant a license to the chipmaker to *use* the ASICs—i.e., licensed chipmakers may not themselves use or pass on to others the right to use the chipmaker's ASICs to make, operate or sell handsets or any other product. APLAs explicitly state that the rights to use the ASICs to make, operate or sell handsets are only conferred by licensing agreements between Qualcomm and Authorized Purchasers (i.e., by SULAs). APLAs also expressly state that the license granted is only for the limited scope laid out, that no other license is granted or implied and that if the chipmaker-licensee sells ASICs to entities that are not Authorized Purchasers, the licensee has materially breached the APLA, which gives

Qualcomm the right to terminate the agreement, including the license granted.

As previously mentioned, producers of chips that are licensed through APLAs are granted, *inter alia*, a license to sell such chips only to handset makers that have entered into a SULA with Qualcomm. The standard terms of the SULAs have granted handset makers a nontransferable, worldwide, nonexclusive, unrestricted license to Qualcomm's patents to *make* (and have made), import and *use* handsets, and to *sell* (and offer to sell) completed handsets. SULAs typically provide for an up-front licensing fee to be paid to Qualcomm, along with a running royalty (paid quarterly) that is set as a percentage of the Net Selling Price of the handsets sold. The broad license typically provided in Qualcomm's SULAs exhausts Qualcomm's patent rights when handset makers sell finished handsets to their customers—typically wireless carriers such as Verizon Wireless—and pay Qualcomm the royalties due under the SULA. Qualcomm has not sought to license its patents to or receive royalties from wireless carriers or end users.

Qualcomm is also in the business of developing and selling its own chips and software for wireless handsets. Qualcomm typically sells chips only to those handset manufacturers that are licensed to Qualcomm's patents under a SULA. Such chip sales are pursuant to Components Supply Agreements, in which handset makers agree to pay Qualcomm an agreed upon price for the chips sold by Qualcomm. Components Supply Agreements provide that the buyer-handset makers may only incorporate the chips purchased from Qualcomm into fully assembled handsets that are the subject of the SULA

between Qualcomm and the handset maker. The sale of Qualcomm chips pursuant to Components Supply Agreements does not provide the buyer-handset makers any license to Qualcomm's patents, and Components Supply Agreements expressly state that no patent license, express or implied, is granted by the sale of the chips or the Components Supply Agreement. Rather, all patent licensing is covered by the SULA. Components Supply Agreements contain a representation and warranty by the buyer-handset maker that the chips purchased pursuant to the Components Supply Agreement will be used solely to develop and manufacture handsets for sale subject to and in accordance with the SULA between Qualcomm and the buyer-handset maker.

SUMMARY OF ARGUMENT

High technology industries, such as the wireless communications industry, frequently involve manufacturing in a multi-step chain of production, which results in various companies owning large portfolios of multifaceted, interrelated patents. Members of these industries accordingly have negotiated licensing agreements under which patent owners license their patents to a diverse array of companies, each with substantially differing licensing needs, at various points in the production chain. Critical to the complex structure of patent licensing in these industries is the well established rule that a patent owner has the flexibility, as a matter of law, to license different aspects of its bundle of make, use and sell rights separately without exhausting the whole of the patent owner's rights, and may grant restricted, conditional licenses that authorize the licensee to practice only those

patent rights that are necessary to accomplish that particular licensee's intended purpose.

Petitioners, as well as their *amici*, urge the Court to disregard industry custom and economically efficient practices, as well as over one hundred years of Court precedents, and, instead, create an expanded formulation of the exhaustion doctrine. Petitioners suggest that patent owners be denied the flexibility of the patent system and instead be limited to granting licenses and collecting royalties only once, at the first step in the production chain. Such an expanded formulation of the exhaustion doctrine oversimplifies the Court's precedents, jeopardizes efficient allocations of risk and reward across the chain of production, and fails to recognize the realities of modern industry. The Court should reconfirm the exhaustion doctrine within the boundaries of its original formulation, and therefore affirm the Federal Circuit decision below.

ARGUMENT

I. PATENT LAW HAS LONG PERMITTED PATENT OWNERS TO ENTER INTO RESTRICTED, CONDITIONAL LICENSES THAT GRANT ONLY LIMITED AUTHORITY WITHOUT EXHAUSTING ALL RIGHTS IN THE LICENSED PATENTS.

The Patent Act grants patent holders "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, . . . the

right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process". 35 U.S.C. § 154(a)(1) (2001). Congress has also prescribed that "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." 35 U.S.C. § 271(a) (2001); *see also* 35 U.S.C. § 271(g) (2001).

Courts have created federal common law that holds that where a patent owner authorizes a complete, unconditional sale—by the patent owner itself or by a licensee—of a patented article, the patent owner's statutory rights to exclude are exhausted as to that article.[5] As the Court explained in *Mitchell*, in the context of a sale by a patent owner (rather than a patent licensee), "where the sale [of a patented product] is *absolute, and without any conditions*, the rule is well settled that the purchaser may continue to use the implement or machine purchased until it is worn out, or he may repair it or improve upon it as he pleases, in same manner as if dealing with property of any other kind." 83 U.S. at 548 (emphasis added); *see also Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 516 (1917) ("[T]he right to vend is exhausted by a single, *unconditional* sale, the article sold being

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[5] Patent exhaustion is exclusively a creation of the courts; the Patent Act does not provide for patent exhaustion. *Cf.* 17 U.S.C. § 109(a)(c) (2001) (providing for copyright exhaustion in the Copyright Act).

thereby carried outside the monopoly of the patent law and rendered free of every restriction which the vendor may attempt to put upon it.") (emphasis added). "The theory behind this rule is that in such a transaction, the patentee has bargained for, and received, an amount equal to the *full* value of the goods." *B. Braun Medical, Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997) (emphasis added) (citing *Adams v. Burke*, 84 U.S. (17 Wall.) 453, 456-57 (1873); *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 663 (1895)); *see also United States v. Masonite Corp.*, 316 U.S. 265, 278 (1942) ("The test has been whether or not there has been such a disposition of the article that it may fairly be said that the patentee has received his reward for the use of that article."); *United States v. Univis Lens Co.*, 316 U.S. 241, 251 (1942) ("[W]hen the patentee has received his reward for the use of his invention by the sale of the article, . . . once that purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold."); *Hobbie v. Jenison*, 149 U.S. 355, 361-62 (1893) ("[H]aving in the act of sale received *all* the royalty or consideration which he claims for the use of his invention in that *particular* machine or instrument, it is open to the use of the purchaser, without further restriction on account of the monopoly of the patentee.") (emphasis added).

However, neither the Patent Act nor federal common law requires patent owners to grant absolute, unrestricted and unconditional authority as to all rights conferred by a patent. Instead, as even *amici* in support of Petitioners recognize, *see* Brief of *Amicus Curiae* Int'l Bus. Machs. in Support of Pet'rs

at 14-17 (Nov. 12, 2007) ("IBM *Amicus* Br."); Brief for the United States as *Amicus Curiae* Supporting Pet'rs at 15-18 (Nov. 13, 2007) ("United States *Amicus* Br."); *see also* Brief of the Biotechnology Industry Organization as *Amicus Curiae* in Support of Neither Party at 21-29 (Nov. 13, 2007); Brief *Amicus Curiae* of the American Seed Trade Association in Support of Neither Party at 16-21 (Nov. 13, 2007), it is well settled that each of the rights conferred by a patent is individually and separately protectable—a patent holder may grant "authority" via a license agreement to each right separately, and the grant of authority may be otherwise restricted or conditional. *See, e.g., Gen. Talking Pictures Corp.*, 305 U.S. at 127 ("The practice of granting licenses for a restricted use is an old one. So far as appears, its legality has never been questioned."); *id.* at 127 ("That a restrictive license is legal seems clear.") (citing generally, *Mitchell*, 83 U.S. (16 Wall.) 544); *United States v. Gen. Elec. Co.*, 272 U.S. 476, 490 (1926) ("The patentee may make and grant a license to another to make and use the patented articles but withhold his right to sell them."); *Mitchell*, 83 U.S. (16 Wall.) at 547, 548-49, 550 (approving license to make and use, but not to sell, patented machine and noting the importance to "keep in view the well-founded distinction between the grant [of] the right to make and vend the patented machine, and the grant of the right to use it") (citing *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539, 549 (1852)); *see also Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 703 (Fed. Cir. 1992) ("This right to exclude [pursuant to 35 U.S.C. § 154] may be waived in whole or in part."); 1 Roger M. Milgrim, Milgrim on Licensing,

§ 2.27 at 2-60.6 (2007) ("The patentee's exclusive right to make, use, sell and import is divisible into, and as such exploitable (by grant of license or otherwise) for, each of those categories."); 1 Jay Dratler, Jr., Licensing of Intellectual Property, § 4.03[2] at 4-25 (2005) ("There is . . . no impediment to a patentee's charging one royalty for manufacture of a product, and another for its use by the manufacturer."); Brief for *Amici Curiae* Nokia Corp. and Nokia Inc. in Support of Pet'rs, 2007 WL 3407022, at *11 (Nov. 13, 2007) ("Nokia *Amicus* Br.") (acknowledging that the authority granted by a patentee to a licensee "may be limited to geographical areas, time periods, certain uses, or a combination thereof").

Similarly, a patent owner may grant authority (as to some or all rights conferred by the Patent Act) to utilize the teachings of a patent for one particular purpose, e.g., in connection with a particular component, and may withhold authority in connection with other purposes, e.g., in connection with a fully-assembled finished product. For example, it is well established that patent owners may restrict their grant of authority to a particular field of use. *See, e.g., Gen. Talking Pictures,* 305 U.S. at 127 (upholding a license that granted the licensee the right to sell the patented amplifiers for private use, but not for commercial use—a right that the patentee licensed to others in separate licensing agreements); *Rubber Co. v. Goodyear,* 76 U.S. (9 Wall.) 788, 799 (1869) (upholding a grant of the right to make and sell, but for use only in a certain geographical area and for the purpose of manufacturing India-rubber cloth); *see also, e.g.,*

1 Herbert Hovenkamp, Mark D. Janis & Mark A. Lemley, IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law, § 3.3b5 at 3-30.2 (Supp. 2007) ("Cases following *General Talking Pictures* have consistently upheld field-of-use and other similar restrictions within the scope of the license against misuse challenges."); 2 Dratler, *supra*, § 7.04 at 7-35 ("Because of the[ ] evident commercial and procompetitive benefits, field-of-use restraints are among the most common restrictive practices in licensing."); U.S. Dep't of Justice and Fed. Trade Comm'n, Antitrust Guidelines for Licensing of Intellectual Property, § 2.3, at 5 (April 13, 1995), *available at* http://www.usdoj.gov/atr/public/guidelines/ipguide.pdf ("Field-of-use, territorial, and other limitations on intellectual property licenses may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible.").

The Federal Circuit has been faithful to this Court's precedents, approving use restrictions under varied circumstances and holding that licenses that limit a licensee's rights to one purpose do not exhaust the patent for other purposes for which authority has not been granted. *See, e.g., B. Braun*, 124 F.3d at 1421, 1426 (explaining that post-sale use restrictions are examples of "express conditions accompanying the sale or license of a patented product [, which] are generally upheld" and that "th[e] exhaustion doctrine . . . does not apply to an expressly conditional sale or license"); *see also Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1488-89 (Fed. Cir. 1986) (upholding as not

anticompetitive a pricing scheme that charged different royalty amounts on the basis of specific, restricted end-uses for which the licensees intended to use the patented device).

The sale of a product that is manufactured and sold pursuant to restricted, conditional authority does not exhaust all rights conferred by the patent covering that product.[6] When a license agreement grants authority to the licensee to exercise only certain of the make/use/sell rights conferred by the Patent Act, or only grants authority that is restricted (to a particular field of use or otherwise), the patent owner has not "bargained for, and received, an amount equal to the *full* value" of the patent, *B. Braun*, 124 F.3d at 1426 (emphasis added) (citing *Adams*, 84 U.S. at 456-57; *Keeler*, 157 U.S. at 663). *See also Keeler*, 157 U.S. at 666-67 ("[N]o article can be unfettered from the claim of [the patent owner's] monopoly without paying its tribute."). In such arrangements, the patent owner presumably has not received compensation for the rights that have not been licensed.

For example, when a patent owner grants, via a license agreement, limited authority to a component manufacturer only to *make* certain components and *sell* those components, the patent owner cannot be

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[6] Qualcomm agrees with the point made by Nokia in its *amicus* brief in support of Petitioners that mere cross-covenants not to sue for infringement do not amount to authority and are incapable of exhausting the patents that are the subject of such cross-covenants. *See* Nokia *Amicus* Br., 2007 WL 3407022, at *19-21.

said to have exhausted its right to receive compensation for *using* such components by combining them with other components to create a fully-assembled finished product. The sale of a component by an entity that has been granted authority only to *make* and *sell*—but not *use*—such components cannot confer upon its customer the unrestricted authority to *use* the components by combining them with other components to create a finished product, because the component manufacturer cannot grant greater rights than it possesses itself.[7] This is axiomatic under the patent laws. *See Mitchell*, 83 U.S. at 550 ("*Nemo dat quod*

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[7] Respondent's discussion of the ability of patent owners to divide and grant sell and use rights separately from make rights, *see* Resp't Br. at 42-46, does not by implication preclude the possibility of granting make and sell rights separately from use rights. *See, e.g., id.* at 42 ("Holders of a patent, like holders of any property, can sell distinct sticks from their bundle of property interests without losing the remainder."). The cases cited by Respondent in which the patent owner was found no longer to control the right to use the article sold, *id.* at 43, stand for the principle that, in the absence of an agreement to the contrary, an *implied license* to use passes with a patented article sold pursuant to an authorized sale. *See, e.g., Univis*, 316 U.S. at 249 (finding that the sale of the blank, which had no use but to be finished into the patented lens, effected both a transfer of title and an implied license to use the blank by finishing it); *Hobbie*, 149 U.S. at 362 ("[In the articles at issue], when they were once lawfully made and sold, there was no restriction on their use to be implied, for the benefit of the patentee or his assignees or licensees."). Of course, an implied license can be expressly disclaimed by the patent owner, as both lower courts found was the case here. *See LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1369 (Fed. Cir. 2006); *LG Elecs., Inc. v. Asustek Computer, Inc.*, 248 F. Supp. 2d 912, 918 (N.D. Cal. 2003).

non habet. . . . [N]o one can convey . . . any better title than he owns".). Similarly, the sale of a component by an entity that has been granted restricted authority to utilize the teachings of a patent in connection with only that particular component cannot confer upon the buyer broader authority with respect to other components or products in violation of that restriction.

Here, the Federal Circuit concluded that the license at issue (the full text of which is not available in the public record) was of "limited scope" and gave only "conditional" authority because it "expressly disclaim[ed]" the granting of rights to combine the licensed components with other, non-licensed parts to create patented systems in downstream production. *Bizcom*, 453 F.3d at 1370. The Court's precedents require "unconditional" authority to invoke patent exhaustion, *see, e.g.*, *Mitchell*, 83 U.S. at 547, for the reasons discussed *supra*.

The broad expansion of the exhaustion doctrine for which Petitioners argue would prevent a patent owner from granting restricted authority in exchange for correspondingly lower compensation without exhausting rights for which authority has not been granted and royalties have not been paid. For the reasons discussed *infra*, such a holding would prove disastrous as a matter of policy.

II. AS A POLICY MATTER, PATENT OWNERS SHOULD BE PERMITTED TO GRANT RESTRICTED, CONDITIONAL AUTHORITY TO PARTICIPANTS AT VARIOUS STAGES IN THE PRODUCTION PROCESS.

A. Requiring Patent Owners to License Only the First Party in the Production Chain, as Petitioners Suggest, Would Severely Harm High Technology Industries and Consumers.

Allowing patent owners and licensees who operate at various points in the production chain to enter into licensing agreements that grant restricted and conditional authority in return for royalties or other consideration that compensate patent owners only for the limited authority granted is consistent with the Court's precedents and makes for sound policy. In such arrangements, licensees are not forced to pay for authority that they do not need. The practice of granting portfolio-wide licenses that are restricted in scope—by, e.g., dividing and separately licensing the make/use/sell rights conferred by the patent grant, or granting authority in connection with only one particular product or field of use—is critical in modern high technology industries, where industry players possess thousands of patents with tens of thousands of claims. In such industries, it is common for a single entity to possess patents that, collectively, cover all or most aspects of the technology used in the industry, including components and products created at each step of the production chain. For example, a single entity might possess patents that cover the

component apparatus, other patents that cover a system and method by which various components in the finished product interact, and other patents that cover the finished product apparatus.[8] If, as Petitioners suggest, patent exhaustion were to be redefined such that royalties in connection with patents that are infringed by the finished product could only be collected at the very first step of production, licensors such as Qualcomm effectively would be forced to license their patents only to chipmakers (and therefore receive royalties only from chipmakers). *See* Pet'rs Br. at 15 ("[Petitioners' view of the exhaustion] rule minimizes transaction costs by forcing the patent owner to exact the full value of its patent rights in one negotiation with the first purchaser, which can then share the burden with the rest of the distribution chain by charging a higher price."), 49 (suggesting that under the "traditional exhaustion rule" the patent owner "charg[es] the entire amount to the first party in the chain and rel[ies] on it to pass the cost along in the form of higher prices").[9] For the reasons discussed *infra*, in such a scenario, innovators and component

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[8] In the wireless industry, it is also common for an entity to possess one or more patents, each of which includes a claim that covers a component apparatus, and another claim that covers a system and method by which various components in the finished product interact.

[9] While the majority of Petitioners' brief argues that patent owners should be forced to grant authority only to the very first level in the production chain, *see, e.g.*, Pet'rs Br. at 15, 49, the Petitioners at the end of their brief inconsistently suggest that Respondent could have licensed solely Petitioners or split its royalties between Intel and Petitioners, *id.* at 51.

makers could be significantly harmed, while manufacturers of finished products—like Petitioners—could receive a windfall.

In an effort to support the broad expansion for which they argue, Petitioners present policy and economic arguments that contemplate their redefined exhaustion doctrine's effect upon an oversimplified description of a technology industry. However, Petitioners ignore the economic efficiencies that derive from spreading the financial obligations of patent licensing across the production chain, such that all parties benefiting from the license bear a share of the financial burden proportional to the benefits they themselves derive.

It is the details of modern high technology industries that best illustrate the effects of a rule that would force patent owners to grant authority only to "the first party in the chain", Pet'rs Br. at 15. For example, in the wireless communications industry, some low-end handsets that cost less than $100 at wholesale may use the same chip used by some high-end handsets that cost as much as $400. While the chip used in each handset might have a wide array of capabilities, low-end handsets typically only make use of basic voice functionality, while high-end handsets typically also make use of other functionalities on which the licensed patent portfolio reads, such as high-speed data transfer which makes Internet browsing and video viewing possible. If patent exhaustion were to be redefined such that royalties in connection with many patents that read directly on handsets could only be collected from chipmakers as the first step in the production chain, the royalty received by patent owners such as

Qualcomm would necessarily be a function of the price of the *chip*, not the handset. As a result, the royalty charged would either overburden the low-end handsets (and the consumers who purchase them) or would insufficiently compensate the patent owner for the actual benefits conferred by the patented technologies in the high-end handsets. Overburdening low-end handsets by charging royalties for chip functionality not actually used by those handsets would render such low-end handsets less profitable or even unprofitable, potentially reducing or eliminating their presence in the market. The other alternative—insufficiently compensating innovators for the actual research and development required to produce cutting edge technologies commonly utilized in today's high-end handsets—would provide a windfall to makers of high-end handsets, slow the introduction of new technologies into the industry, and frustrate the goals of the Patent Act.

Petitioners' desired change in the law will also have the adverse effect of increasing the costs for firms seeking to enter component manufacturing. As discussed *supra*, in the wireless industry, both handset makers and chipmakers commonly pay licensing fees in the form of an up-front license fee and a running royalty that is a percentage of the selling price of the product sold, or some combination of the two. Currently, entities that manufacture and sell components, but do not manufacture finished products, are free to seek a license that grants limited authority only to make and sell the components (and not to use the components by incorporating them into the finished product).

Because the total license fees paid in such arrangements logically would be, and in practice commonly are, lower than the total license fees that would be paid if the component manufacturer were forced to obtain an unrestricted and unconditional license, *see B. Braun*, 124 F.3d at 1426 (regarding "an expressly conditional sale or license . . . it is more reasonable to infer that the parties negotiated a price that reflects only the value of the 'use' rights conferred by the patentee"), the cost of manufacturing and selling such components is set at a lower level than would be true under Petitioners' proposal.

Patent owners are more likely to be compensated for the full value of their patents in arrangements that allow for the collection of partial royalties from different points in the production chain. It is unlikely that a component manufacturer who does not incorporate the component into the finished product, and does not earn revenue on the finished product, will be willing to fully compensate the patent owner for that right. However, it *is* likely that (1) the component manufacturer will fully compensate the patent owner for the right to make and sell such components, and (2) the producer of the finished product will fully compensate the patent owner for the right to use the component by incorporating it into the finished product and for the unrestricted rights to then make, use and sell the fully assembled, finished product. Therefore, owners of patents with multiple claims addressed to different components, combinations and/or methods, as well as owners of robust portfolios of patents, are more likely to be compensated for the full value of

such patents or such portfolios—and therefore be motivated to invest intensively in innovating—by granting separate, restricted licenses to entities at the different stages of the production chain.

A simple practical illustration demonstrates the difficulty that patent owners will have being fully compensated under the changed exhaustion doctrine that Petitioners desire. In the wireless industry, running royalties are typically calculated as a percentage of the wholesale price for the particular component or product (e.g., chip or handset) for which the licensing agreement grants authority. The wholesale price of wireless chips tends to fall in the range of $7-$20 per chip, and the majority of chips tend to be priced in the lower end of that range. Royalty rates applied to chips tend to fall in the range of a single-digit percentage. Assuming, for illustrative purposes, a chip price of $10 and a royalty rate of 5%, each chip sold by a chipmaker-licensee to an authorized handset maker would yield $0.50 in royalties to the patent owner. The wholesale price of handsets (i.e., handsets sold from handset makers to wireless carriers) tends to fall in the range of $80-$400 per handset. Most handsets sold tend to be priced in the lower end of that range. Royalty rates applied to handsets tend also to fall in the range of single-digit percentages. Assuming, for illustrative purposes, a handset price of $150 and a royalty rate of 5%, each handset sold by a handset maker-licensee would yield $7.50 in royalties to the patent owner. In such an illustrative scenario, if a patent owner were forced to recoup from chipmakers alone the full value of its patents that cover the handset in which the chip is used, the patentee

would have to charge chipmakers an *additional* royalty at a rate of 75%, for a total royalty burden on chipmakers of 80% of the selling price of the chip, to recover the same $8 in total royalties. Furthermore, as previously mentioned, both handset makers and chipmakers often pay an up-front license fee. If the patent owner was forced to recoup the full value of its patents solely from chipmakers, it would be forced to charge chipmakers alone the up-front license fees that currently are divided between handset makers and chipmakers.

As a matter of economic theory, of course, a financially sound chipmaker confident that it ultimately can pass through those total license fees to its customers might be willing to agree to license fees that represent such a substantial percentage of what otherwise would have been the chip's selling price. However, in practice chipmakers are more likely to balk at such high license fees, for fear of not recovering the cost in their sales price to handset makers, in which event patent owners would not be adequately compensated to motivate the level of research and development that was in fact required to produce their innovations. This is especially true for new technologies in nascent industries, where the market success of the chips and the final products is more speculative. In such a scenario, the more likely result in practice is that the handset makers—who sit in the same level of the production chain as Petitioners—would receive a windfall at the expense of the patent owner innovators.

B. Any Rule that Forces Patent Owners to License Only One Level in the Production Chain Is Unworkable.

Certain *amici* in support of Petitioners seem to suggest that patent owners are not required to license only the first point in the production chain, as Petitioners primarily argue, but instead, that patent owners are permitted to license any one level—but only one level—of the production chain. *See, e.g.*, IBM *Amicus* Br. 9, 24, 31-32; Nokia *Amicus* Br., 2007 WL 3407022, at *2, *20, *23. However, nothing in the Patent Act suggests such a requirement, and neither do the precedents of this Court or the Federal Circuit. *See supra* pp. 13-19. The Court should not now create federal common law that compels such a requirement, which would be unjustified and economically unsound.

As a practical matter, such a requirement would be unworkable because it ignores the existence of patents at each step in the chain of production. Qualcomm's own businesses demonstrate the problem with the "license only one level" proposal. Qualcomm makes and sells its own chipsets, which not only embody some of Qualcomm's patented innovations, but may also practice patents of other companies engaged in the wireless industry. Thus, it is desirable for Qualcomm to be able to enter into portfolio-wide cross-licenses at the chip level, to ensure its unobstructed path to market free from the threat of lengthy and expensive patent litigation. Other chipmakers similarly want "patent peace", and cross-licensing is quite common in the industry. However, under the "license only one level" proposal by some of Petitioners' *amici*, the cost of obtaining

such patent peace through portfolio-wide cross-licenses at the chip level would be exhaustion of patent rights, such that the next step in the chain of production—handset makers—would be able to use those patents free of charge. Thus, all of the problems with Petitioners' "first level of production" proposal, discussed in Part II.A *supra*, again become implicated. And it is simply impractical for a new rule of law to be predicated on the assumption that companies engaged only in an intermediate stage of production will be willing to forego the ability to ensure patent peace through their own licenses or cross-licenses at their own level of production.

Petitioners' broad expansion of the exhaustion doctrine—whether it be the "first level of production" formulation or the "only one level of production" formulation—is inadequate to address the needs of modern industry. Such an expansion would overturn a large body of precedents on which entire industries have relied in structuring their licensing and sales agreements and in arranging their chains of production. Congress, too, has recognized that patent owners may receive revenue on a patent from entities that operate on multiple levels of a chain of production. *See* 35 U.S.C. § 271(d) (2001) ("No patent owner otherwise entitled to relief for infringement . . . shall be denied relief or deemed guilty of misuse . . . by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent".)

Neither Court precedent nor the Patent Act provides any basis on which broadly to expand the doctrine of patent exhaustion as Petitioners desire.

CONCLUSION

For the foregoing reasons, the Court should sustain the decision of the Federal Circuit.

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Respectfully submitted,

MICHAEL D. HARTOGS
QUALCOMM INC.
5775 Morehouse Drive
San Diego, CA 92121
(858) 587-1121

RICHARD W. CLARY
Counsel of Record
CRAVATH, SWAINE & MOORE LLP
825 Eighth Avenue
New York, NY 10019-7475
(212) 474-1000